

We claim:

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1. A method of querying computers connected to a distributed network, said method comprising the steps of:
 - providing a range of addresses to be queried, said range being defined by a beginning address and an ending address;
 - selecting an address to be queried from the range of addresses;
 - transmitting a request to the selected address;
 - creating a response record associated with the selected address in a response output file, said response record comprising the selected address;
 - incrementing the address to be queried according to a predefined order; and
 - repeating said steps of transmitting a request, creating a response record, and incrementing the address until every address in the range of addresses has been queried.
 2. The method of claim 1, wherein the distributed network is the Internet.
 3. The method of claim 1, wherein said step of providing a range of addresses to be queried comprises inputting a beginning address only and wherein the ending address is automatically chosen.
 4. The method of claim 1, wherein the selected address is the beginning address.
 5. The method of claim 1, wherein said request is one of a Hypertext Transfer Protocol ("HTTP") request, a Hypertext Transfer Protocol Secure ("HTTPS") request, a File Transfer Protocol ("FTP") request, a Simple Mail Transfer Protocol ("SMTP") request, a Network News Transfer Protocol ("NNTP") request, a User Datagram Protocol ("UDP") request, and an Internet Chat Relay ("IRC") request.
 6. The method of claim 1, wherein said step of creating a response record comprises:
 - creating a positive response record associated with the selected address in a positive response output file if a reply is received from the selected address in response to the request, said positive response record comprising the selected address; and
 - creating a negative response record associated with the selected address in a negative

response output file if no reply is received from the selected address in response to the request, said negative response record comprising the selected address.

7. The method of claim 6, wherein the positive response output file is a table in a database.
8. The method of claim 6, wherein the negative response output file is a table in a database.
9. The method of claim 6, wherein the positive response output file and the negative response output file each comprise tables in a single database.
10. The method of claim 6, wherein the positive response output file is in a format selected from the group consisting of a text file, a Hypertext Markup Language file, a comma separated values file, a database file, a spreadsheet file, and a pdf file.
11. The method of claim 6, wherein the negative response output file is in a format selected from the group consisting of a text file, a Hypertext Markup Language file, a comma separated values file, a database file, a spreadsheet file, and a pdf file.
12. The method of claim 1, further comprising the step of:
excluding a specified address from the range of addresses to be searched.
13. The method of claim 1, further comprising the step of:
excluding a specified set of addresses from the range of addresses to be searched.
14. The method of claim 1, wherein the range of addresses to be queried is a range of Internet Protocol ("IP") addresses and wherein the selected address is an IP address.
15. The method of claim 14, wherein the selected IP address comprises a primary number, a secondary number, a third number, and a fourth number, and wherein the predefined order comprises incrementing the IP address in the following order:
 - (a) incrementing the secondary number without changing the primary number, third number, and fourth number until the entire range of secondary numbers has been queried;
 - (b) incrementing the third number by one;
 - (c) incrementing the secondary number without changing the primary number, third number, and fourth number until the entire range of secondary numbers has been queried;

- (d) repeating steps (b) and (c) until the entire range of secondary numbers and third numbers has been queried;
- (e) incrementing the fourth number by one;
- (f) incrementing the secondary number without changing the primary number, third number, and fourth number until the entire range of secondary numbers has been queried;
- (g) incrementing the third number by one;
- (h) incrementing the secondary number without changing the primary number, third number, and fourth number until the entire range of secondary numbers has been queried; and
- (i) repeating steps (e) through (h) until the entire range of secondary numbers, third numbers, and fourth numbers has been queried.
16. The method of claim 15, further comprising the steps of:
- incrementing the primary number by one; and
 - repeating steps (a) through (i) until the entire range of secondary numbers, third numbers, and fourth numbers has been queried.
17. The method of claim 1, wherein said steps of transmitting a request, creating a response record, and incrementing the address are repeated only for a predetermined time, said method further comprising the step of:
- discontinuing said step of repeating said steps of transmitting a request, creating a response record, and incrementing the address once the predetermined time has elapsed, regardless of whether every address in the range of addresses has been queried.
18. The method of claim 1, further comprising the steps of:
- temporarily halting the querying of computers through operator intervention prior to completion; and
 - resuming the querying of computers through operator intervention at the selected address where the process was temporarily halted.
19. The method of claim 6, further comprising the steps of:
- selecting a second address from the negative response output file;
 - transmitting a second request to the selected second address;
 - creating a positive response record associated with the selected second address in the

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positive response output file if a reply is received from the selected second address in response to the second request, said positive response record comprising the selected second address;

removing the negative response record associated with the selected second address from the negative response output file if a reply is received from the selected second address in response to the second request;

incrementing the address to be queried; and

repeating said steps of selecting a second address, transmitting a second request, creating a positive response record, removing the negative response record, and incrementing the address until every address in the negative response output file has been queried.

20. The method of claim 6, further comprising the steps of:

selecting a third address from the negative response output file;

transmitting a ping command to the selected third address;

creating a pinged record associated with the selected third address in a pinged output file if a reply is received from the selected third address in response to the ping command, said pinged record comprising the selected third address;

incrementing the address to be searched; and

repeating said steps of selecting a third address, transmitting a ping command, creating a pinged record, and incrementing the address until every address in the negative response output file has been queried.

21. The method of claim 20, further comprising the steps of:

selecting a fourth address from the pinged output file;

transmitting a fourth request to the selected fourth address;

creating a positive response record associated with the selected fourth address in the positive response output file if a reply is received from the selected fourth address in response to the fourth request, said positive response record comprising the selected fourth address;

removing the negative response record associated with the selected fourth address from the negative response output file if a reply is received from the selected fourth address in response to the fourth request;

incrementing the address to be searched; and

repeating said steps of selecting a fourth address, transmitting a fourth request, creating a positive response record, removing the negative response record, and incrementing the address until every address in the pinged output file has been queried.

22. The method of claim 21, further comprising the step of:

removing the pinged record associated with the selected fourth address from the pinged output file if a reply is received from the selected fourth address in response to the fourth request.

23. The method of claim 1, further comprising the step of:

operating a plurality of computers remotely to search the range of addresses in tandem.

24. The method of claim 1, further comprising the step of:

filtering addresses listed in the response output file for content based upon user-specified criteria.

25. A method of querying a range of IP addresses, wherein each IP address in the range uniquely identifies a computer connected to a distributed network, wherein the IP address comprises a primary number, a secondary number, a third number, and a fourth number, and wherein the range of IP addresses is queried by transmitting a request to each IP address in the range, said method comprising:

- (a) inputting a beginning IP address in the range of IP addresses to be queried;
- (b) incrementing the secondary number in the IP address without changing the primary number, third number, or fourth number until the entire range of possible secondary numbers has been queried;
- (c) incrementing the third number in the IP address by one;
- (d) incrementing the secondary number in the IP address without changing the primary number, third number, and fourth number until the entire range of possible secondary numbers has been queried;
- (e) repeating steps (c) and (d) until the entire range of possible secondary numbers and third numbers has been queried;
- (f) incrementing the fourth number in the IP address by one;
- (g) incrementing the secondary number in the IP address without changing the

primary number, third number, and fourth number until the entire range of possible secondary numbers has been queried;

- (h) incrementing the third number in the IP address by one;
- (i) incrementing the secondary number in the IP address without changing the primary number, third number, and fourth number until the entire range of possible secondary numbers has been queried; and
- (j) repeating steps (f) through (i) until the entire range of possible secondary numbers, third numbers, and fourth numbers has been queried.

26. The method of claim 25, further comprising the steps of:

- incrementing the primary number by one; and
- repeating steps (a) through (j) until the entire range of secondary numbers, third numbers, and fourth numbers has been queried.

27. The method of claim 25, wherein said request is one of a Hypertext Transfer Protocol ("HTTP") request, a Hypertext Transfer Protocol Secure ("HTTPS") request, a File Transfer Protocol ("FTP") request, a Simple Mail Transfer Protocol ("SMTP") request, a Network News Transfer Protocol ("NNTP") request, a User Datagram Protocol ("UDP") request, and an Internet Chat Relay ("IRC") request.

28. The method of claim 25, wherein at least one of steps (e) and (j) are repeated only for a predetermined time, said method further comprising the step of:

- (k) discontinuing at least one of steps (e) and (j) once the predetermined time has elapsed, regardless of whether every IP address in the range of IP addresses has been queried.

29. The method of claim 25, further comprising the steps of:

- (k) temporarily halting the querying of IP addresses through operator intervention prior to completion; and
- (l) resuming the querying of IP addresses through operator intervention at a later time.

30. A method of searching server computers connected to a distributed network, said method comprising the steps of:

- selecting a first IP address from a negative response file, said negative response file

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comprising IP addresses of server computers that have failed to respond to a network/service request;

transmitting a first request to the selected first IP address;

creating a positive response record associated with the selected first IP address in a positive response file if a reply is received from the selected first IP address in response to the first request, said positive response record comprising the selected first IP address;

removing the selected first IP address from the negative response file if a reply is received from the selected first IP address in response to the first request; and

repeating said steps of selecting a first IP address, transmitting a first request, creating a positive response record associated with the selected first IP address, and removing the selected first IP address until every IP address in the negative response output file has been searched.

31. The method of claim 30, further comprising the steps of:

selecting a second IP address from the negative response file;

transmitting a ping command to the selected second IP address;

creating a pinged record associated with the selected second IP address in a pinged output file if a reply is received from the selected second IP address in response to the ping command, said pinged record comprising the selected second IP address; and

repeating said steps of selecting a second IP address, transmitting a ping command, and creating a pinged record until every IP address in the negative response file has been searched.

32. The method of claim 31, further comprising the steps of:

selecting a third IP address from the pinged output file;

transmitting a second request to the selected third IP address;

creating a positive response record associated with the selected third IP address in the positive response file if a reply is received from the selected third IP address in response to the second request, said positive response record comprising the selected third IP address;

removing the selected third IP address from the negative response file if a reply is received from the selected third IP address in response to the second request; and

repeating said steps selecting a third IP address, transmitting a second request, creating a

002280" 5E2E4960

positive response record associated with the selected third IP address, and removing the selected third IP address from the negative response file until every IP address in the pinged output file has been searched.

33. The method of claim 32, further comprising the step of:

removing the selected third IP address from the pinged output file if a reply is received from the selected third IP address in response to the second request.

34. The method of claim 32, wherein the network service request, first request, and second request are of the same type selected from the group consisting of: a Hypertext Transfer Protocol ("HTTP") request, a Hypertext Transfer Protocol Secure ("HTTPS") request, a File Transfer Protocol ("FTP") request, a Simple Mail Transfer Protocol ("SMTP") request, a Network News Transfer Protocol ("NNTP") request, a User Datagram Protocol ("UDP") request, and an Internet Chat Relay ("IRC") request.

35. The method of claim 30, wherein the positive response output file is a table in a database.

36. The method of claim 30, wherein the negative response output file is a table in a database.

37. The method of claim 30, wherein the positive response output file and the negative response output file each comprise tables in a single database.

38. The method of claim 30, wherein the positive response output file is in a format selected from the group consisting of a text file, a Hypertext Markup Language file, a comma separated values file, a database file, a spreadsheet file, and a pdf file.

39. The method of claim 30, wherein the negative response output file is in a format selected from the group consisting of a text file, a Hypertext Markup Language file, a comma separated values file, a database file, a spreadsheet file, and a pdf file.

40. The method of claim 30, further comprising the step of:

filtering addresses listed in the positive response file for content based upon user-specified criteria.

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